

---

## Author Index of Volume B 30

---

- Abalov, A.A., 101  
Atanasov, P., 179
- Baran, S.V., 191  
Barinova, O.P., 89  
Battenberg, A., 29  
Bier, F., 55  
Bilitewski, U., 55  
Bisenberger, M., 127  
Brandenburg, A., 55  
Bräuchle, C., 127  
Breidt, V.F., 29
- Căldăraru, M., 35  
Casey, V., 233  
Cheng, Y.-T., 11  
Cho, J.-H., 137  
Choi, M.F., 167  
Compton, R.G., 83  
Czolk, R., 61
- Dabill, D.W., 111  
Decroly, A., 143  
de Haan, A., 143  
Diefes, R.S., 133  
D'Silva, C., 151  
Dudik, L., 133  
Durst, R.A., 81
- Franke, H., 201  
Frolov, O.S., 101  
Fukuzawa, K., 121
- Gamburzev, S., 179  
Gardner, J.W., 185
- Glatz, J.F.C., 71  
Gratzl, M., 133
- Hampp, N., 127  
Hawkins, P., 167  
Hines, E.L., 185  
Hu, M., 65  
Hui, K.Y., 133
- Ionescu, N.I., 35  
Ishihara, T., 43  
Isogai, Y., 47
- Jiang, M.R.M., 3
- Kan, J., 7  
Karube, I., 17  
Kim, H.-S., 137  
Kim, J.S., 159  
Kim, S.-T., 23  
Komplin, G.C., 173  
Kong, L., 217  
Kononenko, Yu.G., 101  
Kornilov, S.V., 89  
Kruchinin, A.A., 77  
Kudo, T., 95  
Kuвано, H., 121
- Lakowicz, J.R., 207  
Lee, D.G., 159  
Li, J., 65  
Li, Y., 11
- Lim, C., 223  
Lisdar, F., 195  
Lisi, D., 11  
Liu, C.C., 133
- Martelet, C., 101  
Masherova, N.P., 191  
Maupas, H., 101  
McMonagle, J.B., 233  
Miura, N., 195  
Miyayama, M., 47  
Mu, S., 7
- Nei, L., 83  
Netchiporouk, L.I., 101
- O'Beim, B., 233  
Oh, S., 223
- Park, C., 23  
Park, Y.W., 23  
Pietro, W.J., 173  
Podgorsek, R.P., 201  
Polzius, R., 55  
Popa, V.T., 35
- Ramsden, J.J., 107  
Renneberg, R., 71
- Sandrovsky, A.K., 101  
Sato, S., 43  
Shen, Y., 217  
Shi, Y., 7
- Shimohigoshi, M., 17  
Shin, M.-C., 137  
Shul'ga, A.A., 101  
Siegmann-Thoss, C., 71  
Silber, A., 127  
Singh, S., 185  
Spener, F., 71  
Sprinceana, D., 35  
Szmecinski, H., 207
- Takita, Y., 43  
Thevenot, D.R., 81  
Toth, K., 81  
Trofimenko, N.E., 191  
Tsuyumoto, I., 95
- Vahrenkamp, H., 29  
Vlasov, Yu.G., 77
- Wagner, E., 55  
Walsh, P.T., 111  
Wang, W.M., 11  
Weller, M.T., 3  
Wilkins, E., 179  
Williams, G., 151  
Wilson, G.S., 81
- Yamazoe, N., 195  
Yanagida, H., 47  
Yanagisawa, K., 121  
Yu, R., 65  
Yun, D.H., 23
- Zhou, F., 7

## Subject Index of Volume B 30

- Affinity reactions**  
direct observation of affinity reactions by reflected-mode operation of integrated optical grating coupler, 55
- Alcohol sensors**  
gas-sensing property and mechanism of  $\text{Ca}_x\text{La}_{1-x}\text{FeO}_3$  ceramics, 217
- Alcohol vapour**  
optical detection of water/alcohol vapours by polyimide lightguides, 201
- Alumina substrates**  
sample/reagent adsorption on alumina versus Pyrex substrates of microfabricated electrochemical sensors, 133
- Amperometric enzyme immunosensor**  
enzyme immunosensor for diagnosis of myocardial infarction, 71
- Amperometric measurements**  
thick-film multichannel biosensors for simultaneous amperometric and potentiometric measurements, 127
- Anion sensitivity**  
studies on the anion sensitivity of immobilized metalloporphyrins for application as optochemical sensors, 61
- Ascorbic acid**  
pressed-pellet solid potentiometric sensor for ascorbic acid based on derivatives of cobalt(II) phthalocyanine doped with iodine, 65
- Azide**  
encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- Bacteriorhodopsin**  
photoelectrical cell utilizing bacteriorhodopsin on a hole array fabricated by micromachining techniques, 121
- Binary oxides**  
sensitive detection of nitrogen oxides based upon capacitance changes in binary oxide mixture, 43
- Biosensors**  
surface plasmon resonance monitoring by means of polarization state measurement in reflected light as the basis of a DNA-probe biosensor, 77
- Bio-thermo chips**  
development of uric acid and oxalic acid sensors using a bio-thermo chip, 17
- $\alpha, \alpha'$ -Bipyridine**  
effect of  $\alpha, \alpha'$ -bipyridine on activity of the polyaniline uricase electrode, 7
- Calorimetric biosensors**  
development of uric acid and oxalic acid sensors using a bio-thermo chip, 17
- Capacitance charges**  
sensitive detection of nitrogen oxides based upon capacitance changes in binary oxide mixture, 43
- Catalysts**  
surface dynamics in tin dioxide-containing catalysts. II. Competition between water and oxygen adsorption on polycrystalline tin dioxide, 35
- microstructure evolution and gas sensitivities of Pd-doped  $\text{SnO}_2$ -based sensor prepared by three different catalyst-addition processes, 223
- Catalytic sensors**  
the effect of hyperbaric pressure on catalytic and electrochemical gas sensors, 111
- Ceramics**  
gas-sensing property and mechanism of  $\text{Ca}_x\text{La}_{1-x}\text{FeO}_3$  ceramics, 217
- Clark sensors**  
an improved Clark-type galvanic sensor for dissolved oxygen, 83
- Clark-type oxygen electrodes**  
enzyme immunosensor for diagnosis of myocardial infarction, 71
- Clinical chemistry**  
frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Coenzyme functionalization**  
redox coenzyme functionalization of electrochemically grown Prussian blue films, 173
- Coffee**  
fuzzy neural computing of coffee and tainted-water data from an electronic nose, 185
- Conducting polymers**  
effect of  $\alpha, \alpha'$ -bipyridine on activity of the polyaniline uricase electrode, 7
- Contact charge-transfer absorption**  
a fibre-optic oxygen sensor based on contact charge-transfer absorption, 167
- Copper phthalocyanine**  
enhancement of the  $\text{NO}_2$ -sensing capability of copper phthalocyanine by measuring the relative resistance change, 23  
electrical resistance of copper phthalocyanine thin films as influenced by substrates, electrodes and physical features of the films, 143
- Crosslinking**  
encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- Cure monitoring**  
analysis of dielectric sensors for the cure monitoring of resin matrix composite materials, 159
- Dielectric sensors**  
analysis of dielectric sensors for the cure monitoring of resin matrix composite materials, 159
- DNA probes**  
surface plasmon resonance monitoring by means of polarization state measurement in reflected light as the basis of a DNA-probe biosensor, 77
- Dosimeters**  
a dosimeter for oligopeptide hormones, 107
- Electrical resistance**  
electrical resistance of copper phthalocyanine thin films as influenced by substrates, electrodes and physical features of the films, 143

- Electrochemical adsorption
  - electrochemical adsorption of glucose oxidase onto polypyrrole film for the construction of a glucose biosensor, 137
- Electrochemical sensors
  - the effect of hyperbaric pressure on catalytic and electrochemical gas sensors, 111
  - sample/reagent adsorption on alumina versus Pyrex substrates of microfabricated electrochemical sensors, 133
- Electronic noses
  - fuzzy neural computing of coffee and tainted-water data from an electronic nose, 185
- Encapsulation
  - encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- Enzyme electrodes
  - effect of  $\alpha, \alpha'$ -bipyridine on activity of the polyaniline uricase electrode, 7
- Enzyme sensors
  - NASICON-based solid-electrolyte cell as transducer for enzyme sensors, 195
- Fatty acid binding protein
  - enzyme immunosensor for diagnosis of myocardial infarction, 71
- Fibre-optic sensors
  - a fibre-optic oxygen sensor based on contact charge-transfer absorption, 167
- Fluorescence
  - frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Fluorescence spectroscopy
  - frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Frequency-domain fluorescence
  - frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Fuzzy neural networks
  - fuzzy neural computing of coffee and tainted-water data from an electronic nose, 185
- Galvanic sensors
  - an improved Clark-type galvanic sensor for dissolved oxygen, 83
- Gas sensors
  - PZT/ZnO actuator responding to reducing gases, 47
  - the effect of hyperbaric pressure on catalytic and electrochemical gas sensors, 111
  - electrical resistance of copper phthalocyanine thin films as influenced by substrates, electrodes and physical features of the films, 143
  - gas-sensing property and mechanism of  $\text{Ca}_x\text{La}_{1-x}\text{FeO}_3$  ceramics, 217
  - microstructure evolution and gas sensitivities of Pd-doped  $\text{SnO}_2$ -based sensor prepared by three different catalyst-addition processes, 223
- Glucose
  - NASICON-based solid-electrolyte cell as transducer for enzyme sensors, 195
- Glucose biosensors
  - electrochemical adsorption of glucose oxidase onto polypyrrole film for the construction of a glucose biosensor, 137
  - performance of glucose biosensor based on oxygen electrode in physiological fluids and at body temperature, 179
- Glucose monitoring
  - performance of glucose biosensor based on oxygen electrode in physiological fluids and at body temperature, 179
- Glucose oxidase
  - enzyme immunosensor for diagnosis of myocardial infarction, 71
  - electrochemical adsorption of glucose oxidase onto polypyrrole film for the construction of a glucose biosensor, 137
- Glucose sensors
  - operation of an ISFET with non-insulated substrate directly exposed to the solution, 101
- Grating couplers
  - direct observation of affinity reactions by reflected-mode operation of integrated optical grating coupler, 55
- Hole arrays
  - photoelectrical cell utilizing bacteriorhodopsin on a hole array fabricated by micromachining techniques, 121
- Humidity measurements
  - humidity measurements in a sealed package with sorption sensors, 89
- Humidity sensors
  - humidity sensor using potassium hexagonal tungsten bronze synthesized from peroxo-polytungstic acid, 95
- Hydrogen sensors
  - preparation and characterization of Pd/Ni thin films for hydrogen sensing, 11
  - minority-carrier MIS tunnel diode hydrogen sensors, 233
- Hyperbaric pressure
  - the effect of hyperbaric pressure on catalytic and electrochemical gas sensors, 111
- Immobilization
  - enzyme immunosensor for diagnosis of myocardial infarction, 71
- Integrated optical sensors
  - a dosimeter for oligopeptide hormones, 107
- Integrated optics
  - direct observation of affinity reactions by reflected-mode operation of integrated optical grating coupler, 55
- Integrated thin-film multi-electrode arrays
  - encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- Iodine
  - pressed-pellet solid potentiometric sensor for ascorbic acid based on derivatives of cobalt(II) phthalocyanine doped with iodine, 65
- ISFETs
  - operation of an ISFET with non-insulated substrate directly exposed to the solution, 101
- Lifetime-based sensing
  - frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Metal electrodes
  - NASICON-based solid-electrolyte cell as transducer for enzyme sensors, 195
- Metalloporphyrins
  - studies on the anion sensitivity of immobilized metalloporphyrins for application as optochemical sensors, 61
- Metal phthalocyanines
  - pressed-pellet solid potentiometric sensor for ascorbic acid based on derivatives of cobalt(II) phthalocyanine doped with iodine, 65
- Microfabrication
  - sample/reagent adsorption on alumina versus Pyrex substrates of microfabricated electrochemical sensors, 133
- Micromachining
  - photoelectrical cell utilizing bacteriorhodopsin on a hole array fabricated by micromachining techniques, 121
- MIS tunnel diodes
  - minority-carrier MIS tunnel diode hydrogen sensors, 233
- Molecular semiconductors
  - redox coenzyme functionalization of electrochemically grown Prussian blue films, 173
- Multichannel biosensors
  - thick-film multichannel biosensors for simultaneous amperometric and potentiometric measurements, 127

- Myocardial infarction diagnosis  
  enzyme immunosensor for diagnosis of myocardial infarction, 71
- NASICON  
  NASICON-based solid-electrolyte cell as transducer for enzyme sensors, 195
- Nickel  
  preparation and characterization of Pd/Ni thin films for hydrogen sensing, 11
- Nitrite sodalite  
  a nitrite sodalite-based NO<sub>2</sub> gas sensor, 3
- Nitrogen dioxide sensors  
  a nitrite sodalite-based NO<sub>2</sub> gas sensor, 3  
  enhancement of the NO<sub>2</sub>-sensing capability of copper phthalocyanine by measuring the relative resistance change, 23
- Nitrogen oxide sensors  
  sensitive detection of nitrogen oxides based upon capacitance changes in binary oxide mixture, 43
- Non-invasive sensing  
  frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Oligopeptide hormones  
  a dosimeter for oligopeptide hormones, 107
- Optical sensors  
  optical detection of water/alcohol vapours by polyimide lightguides, 201
- Optochemical sensors  
  studies on the anion sensitivity of immobilized metalloporphyrins for application as optochemical sensors, 61
- Organometallic materials  
  synthesis and test of organometallic materials as sensitive layers on quartz microbalance devices, 29
- Oxalic acid  
  development of uric acid and oxalic acid sensors using a bio-thermo-chip, 17
- Oxygen electrodes  
  performance of glucose biosensor based on oxygen electrode in physiological fluids and at body temperature, 179
- Oxygen sensors  
  an improved Clark-type galvanic sensor for dissolved oxygen, 83  
  a fibre-optic oxygen sensor based on contact charge-transfer absorption, 167
- Palladium  
  preparation and characterization of Pd/Ni thin films for hydrogen sensing, 11  
  microstructure evolution and gas sensitivities of Pd-doped SnO<sub>2</sub>-based sensor prepared by three different catalyst-addition processes, 223
- Photo-adhesives  
  encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- Photoelectrical cells  
  photoelectrical cell utilizing bacteriorhodopsin on a hole array fabricated by micromachining techniques, 121
- Photon migration  
  frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Photoresist  
  encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- pH sensing  
  frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Piezoelectric actuators  
  PZT/ZnO actuator responding to reducing gases, 47
- Polyimide lightguides  
  optical detection of water/alcohol vapours by polyimide lightguides, 201
- Polypyrrole  
  electrochemical adsorption of glucose oxidase onto polypyrrole film for the construction of a glucose biosensor, 137
- Poly(styrene)  
  encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- Porous structure  
  correlation between carrier porous structure and gas-sensitive properties of thermocatalytic gas sensors, 191
- Potassium hexagonal tungsten bronze  
  humidity sensor using potassium hexagonal tungsten bronze synthesized from peroxo-polytungstic acid, 95
- Potentiometric measurements  
  thick-film multichannel biosensors for simultaneous amperometric and potentiometric measurements, 127
- Potentiometric sensors  
  pressed-pellet solid potentiometric sensor for ascorbic acid based on derivatives of cobalt(II) phthalocyanine doped with iodine, 65
- Prussian blue  
  redox coenzyme functionalization of electrochemically grown Prussian blue films, 173
- Pyrex substrates  
  sample/reagent adsorption on alumina versus Pyrex substrates of microfabricated electrochemical sensors, 133
- PZT  
  PZT/ZnO actuator responding to reducing gases, 47
- Quartz microbalance devices  
  synthesis and test of organometallic materials as sensitive layers on quartz microbalance devices, 29
- Reflected-mode operation  
  direct observation of affinity reactions by reflected-mode operation of integrated optical grating coupler, 55
- Relative resistance  
  enhancement of the NO<sub>2</sub>-sensing capability of copper phthalocyanine by measuring the relative resistance change, 23
- Resin matrix composites  
  analysis of dielectric sensors for the cure monitoring of resin matrix composite materials, 159
- Sample/reagent adsorption  
  sample/reagent adsorption on alumina versus Pyrex substrates of microfabricated electrochemical sensors, 133
- Sealed packages  
  humidity measurements in a sealed package with sorption sensors, 89
- Sensing  
  frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Sensors  
  encapsulation of an integrated thin-film multi-electrode sensor using photocurable poly(styrene), 151
- Silicon nitride  
  operation of an ISFET with non-insulated substrate directly exposed to the solution, 101
- Solid electrolytes  
  a nitrite sodalite-based NO<sub>2</sub> gas sensor, 3  
  NASICON-based solid-electrolyte cell as transducer for enzyme sensors, 195
- Solvent vapor sensors  
  synthesis and test of organometallic materials as sensitive layers on quartz microbalance devices, 29

- Sorption sensors  
  humidity measurements in a sealed package with sorption sensors, 89
- Surface dynamics  
  surface dynamics in tin dioxide-containing catalysts. II. Competition between water and oxygen adsorption on polycrystalline tin dioxide, 35
- Surface plasmon resonance  
  surface plasmon resonance monitoring by means of polarization state measurement in reflected light as the basis of a DNA-probe biosensor, 77
- Tainted water  
  fuzzy neural computing of coffee and tainted-water data from an electronic nose, 185
- Thermocatalytic gas sensors  
  correlation between carrier porous structure and gas-sensitive properties of thermocatalytic gas sensors, 191
- Thin-film sensors  
  preparation and characterization of Pd/Ni thin films for hydrogen sensing, 11
- Time-resolved fluorescence  
  frequency-domain lifetime measurements and sensing in highly scattering media, 207
- Tin dioxide  
  surface dynamics in tin dioxide-containing catalysts. II. Competition between water and oxygen adsorption on polycrystalline tin dioxide, 35  
  microstructure evolution and gas sensitivities of Pd-doped SnO<sub>2</sub>-based sensor prepared by three different catalyst-addition processes, 223
- Uric acid  
  development of uric acid and oxalic acid sensors using a bio-thermochip, 17  
  NASICON-based solid-electrolyte cell as transducer for enzyme sensors, 195
- Uricase  
  effect of  $\alpha,\alpha'$ -bipyridine on activity of the polyaniline uricase electrode, 7
- Water vapour  
  optical detection of water/alcohol vapours by polyimide lightguides, 201
- Zinc oxide  
  PZT/ZnO actuator responding to reducing gases, 47